



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,487	09/29/2005	Karsten Eichhorn	68897-011	3671
29493 7590 10/27/2008 HUSCH BLACKWELL SANDERS LLP 190 CARONDELET PLAZA SUITE 600 ST. LOUIS, MO 63105-3441				
EXAMINER				
SHALLENBERGER, JULIE A				
ART UNIT		PAPER NUMBER		
2885				
MAIL DATE		DELIVERY MODE		
10/27/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,487

Applicant(s)

EICHHORN ET AL.

Examiner

JULIE A. SHALLENBERGER

Art Unit

2885

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/22/08 has been entered.

Claim Objections

Claim 1 is objected to because "the edge" is improper antecedent since a plurality of edges is claimed, and "the edge" is not distinguished. Also, line 17 recited "at least one edge wall" however it is unclear if this is one of "the plurality of edges" recited in line 12.

Claim 15 is objected to because lines 14 and 15 do not make grammatical sense. It is unclear what the applicant is attempting to claim in reciting "a second luminous occurring in association..."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9-11, 13-18, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Biebl (6,375,340) in view of Runfola ((6,601,983), and further in view of Mizutani (5,808,592).

In regard to claims 1 and 16, Biebl teaches a lamp comprising a planar luminous panel 8 having a plurality of luminous chips 6 arranged in a common recess facing the direction of light emission (fig. 2), and a plurality of edges in special arrangement to the luminous chips such that a predetermined luminance gradient in a light distribution of the lamp is formed by the edges, and an edge (right side – figure 2) producing a LDB whereby a luminance gradient formed by the wall is larger than a luminance gradient formed by another wall (left side adjacent to IC) (col. 4 lines 5-10), but lacks the teaching of a lens and at least one light emitting diode substantially directly adjoining at least one edge wall.

Runfola teaches a lens 5 (col. 2 line 11).

Mizutani teaches LED chips that substantially directly adjoin at least one edge wall (figure 3A-3C and 9B col. 6 lines 35-39 and col.8 lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a lens as taught by Runfola in order to direct the light as

desired for various applications of the lighting device, and It would have been obvious to one of ordinary skill in the art at the time the invention was made to position LED chips substantially adjoining a side wall in order to maximize the number light sources in the lighting device.

In regard to the limitation of the luminous panel being "for a headlamp", the applicant is advised that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987). It is also noted that limitations to the headlamp do not further limit the luminous panel and are not considered relevant to the invention.

In regard to claim 2, Biebl teaches the recess is trough shaped with an edge wall that runs perpendicularly to the direction of light emission of the luminous panel and stands up from a bottom side of the recess and faces away from the bottom side defines the edge (figure 2).

In regard to claim 3, Biebl teaches the edge runs peripherally in a plane perpendicularly to the main direction of emission of the luminous panel (fig. 2).

In regard to claim 4, Biebl teaches the shape of the side wall in combination with the optical element produces a predetermined luminance distribution (fig. 2).

In regard to claim 5, Biebl teaches an edge wall and the recess have a rectangular segment in a top view (figure 2) and the edge has a break for forming a light dark boundary (corner section).

In regard to claims 6 and 17, Mizutani teaches several LED chips arranged directly adjoining at least the edge wall comprising the edge producing the light dark boundary (figures 3A-C and 9B col. 6 lines 35-39 and col. 8 lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the LEDs adjoin the edge in order to fit more LEDs without having to increase the size of the lamp.

In regard to claim 9, Biebl teaches a reflective coating (aluminum and/or copper) layer on the support 3 (col. 3 lines 37-41).

It is noted that reflective coatings are well known and used in the art of illumination, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a reflective coating in order to project more light toward the output and thereby increase the overall efficiency.

In regard to claim 10, Biebl teaches the planar luminous panel 8 integrated in a luminous plate 5 wherein the recess is set in a front side of the luminous plate and a front side running perpendicular to the direction of light emission (fig. 2, col. 4 lines 5-10)

In regard to claims 11 and 15, Biebl teaches a lamp with a luminous panel 5, a base 8, a luminous chip 4 having a perimeter and a first extent located within the recess of the luminous panel, an edge portion having a second extent in the direction of illumination which is further from the base than the first extent, the luminous panel having a first spaced relation (left side) with said perimeter of the chip and another portion in a second spaced relation with the said perimeter (front, back, or right side)

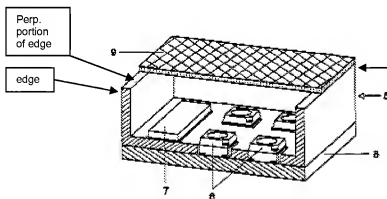
wherein the edge limits light distribution to be contained within the region of the edge (figure 2, col. 4 lines 5-10).

In regard to the second extent and being in a focal plane of a lens, Runfola teaches a lens 5 which is positioned adjacent to a second extent and in a focal plane of a lens of a headlight.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second extent of Biebl correspond to the focal plane of a headlight as taught by Runfola in order to effectively focus the light of the device.

In regard to claim 13, Biebl teaches front, back, and right sides of the edge as well as the lower portions are all adjacent to chip perimeters (see figure 2).

In regard to claim 14, Biebl teaches a first spaced relation of a panel's edge (left) with the perimeter of a chip causing a first luminous gradient and second spaced relation (front, back, or right side) of the edge with the perimeter creating a second luminous gradient (see figure 2).



In regard to claim 18, the luminous panel of 18 is capable of being mounted as a component within a light housing (figure 2).

In regard to claim 20, Biebl teaches a luminous gradient and light distribution consisting of a main beam (combination of beams from LEDs 6 shown in figure 2).

In regard to claims 21-24, Biebl teaches an asymmetric beam (see figure 2). The distribution is clearly asymmetric because the light sources are not evenly distributed along the entire bottom of the luminous panel (only on the right side, therefore more intensity will be emitting from the right side).

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Runfola, and Mizutani and further in view of Wang (2004/0164675).

Biebl, Runfola, and Mizutani teach the invention described above, but lack the teaching of the recess being filled with a light-converting material integrated as a cast which covers the recess.

Wang teaches a light-converting material 16 which covers a recess (made by walls 25) where diode 10 is located (see figure 6), [0016].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use colored LEDs that are converted into white light using a light-converting material in order to reduce the cost of the LEDs used in the lamp device.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Runfola, and Mizutani and further in view of Lin (5,419,065).

Biebl, Runfola, and Mizutani teach the invention described above, but lack the teaching of the panel having a triangular shape.

Lin teaches a triangular shaped panel (figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the panel in the shape of a triangle in order to limit the light output to match the desired shape.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Runfola, and Mizutani and further in view of Martineau (2002/0105801).

Biebl, Runfola, and Mizutani teach the invention described above, but do not explicitly teach the headlamp further comprising a housing adapted to mount at least one luminous panel.

Martineau teaches a headlamp housing 10 adapted to mount at least one luminous panel 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the device of Biebl modified by Runfola and Mizutani in order to use the luminous panel in a headlamp housing which will provide further protection for the luminous panel.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIE A. SHALLENBERGER whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon-Suk (James) Lee can be reached on 571-272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS
AU 2885
/Anabel M Ton/
Primary Examiner, Art Unit 2875